

Applicant: Kamel M. Shaheen
Application No.: 10/730,603

REMARKS

The present application contains claims 1-15. Claims 1-7, 10, 14 and 15 have been amended.

A new Abstract is submitted herewith to replace the Abstract originally filed.

Responsive to the requirement, a substitute Declaration is included.

The objections to claims 1-15 are duly noted. These claims have been amended to adopt the suggested language of the Examiner and is submitted that the objections to the claims should be withdrawn.

Claims 1-15 have been rejected as failing to comply with 35 U.S.C. Section 112, 2nd paragraph. This rejection is respectfully traversed.

The changes to the claims noted in the Section 112 rejection in paragraph 4, page 4 of the Official Action have been carefully considered and Applicant has amended the claims to comply with the second paragraph of Section 112 by providing proper antecedents and it is submitted that this rejection should be withdrawn.

Claims 1, 4 and 7 have been rejected under 35 U.S.C. Section 102(e) as anticipated by Jawanda (Patent '581). This rejection is respectfully traversed.

Firstly it should be noted that Patent '581 requires both a mobile terminal 14 and a mobile phone 16 in order to practice the invention of the patent '581. Mobile

terminal 14 is capable of communicating directly with WLAN 12 only when WLAN 12 is equipped with a network adapter 20 (see Fig. 1) and when mobile terminal 14 is equipped with a wireless LAN adapter 64 (see Fig. 2).

The operation of the roaming capability taught by patent '581 is disclosed starting at line 20 of column 4. The initial example given is a situation where mobile terminal 14 is not able to communicate with WLAN 12, requiring mobile terminal 14 to communicate with mobile phones 16 through I/O adapter 78 provided in mobile terminal 14, for communication with mobile phone 16. One type of interface between mobile terminal 14 and mobile phone 16 is described as an RS232 connection.

Mobile phone 16 responds to this request by establishing a wireless data connection through a transmission to base station 30 forming part of the WWAN 10. Datagrams are then capable of being transferred between application 90 contained within and executed by mobile terminal 14 and application 91 executed by a fixed terminal 24 within WLAN 12 (see Fig. 3). The network access arbitrator 92 (see Fig. 3) selects CAI (cellular access interface) 94 for transmitting outbound datagrams to mobile terminal 14 which then transmits these datagrams by way of the I/O adapter 78, local phone 16, base station 30, NSS 32 and IWF 36 (see Fig. 1) to the CAI 94 executed by WNG 38 (see Fig. 3). WNG 38 transmits the outbound datagrams from mobile terminal 14 to WLAN-G 22 using mobile IP protocol. These

datagrams are then converted by WLAN-G 22 to the protocol for WLAN 12 and forwards them to the fixed terminal 24. Datagrams which are outbound from application 91 of fixed terminal 24 follow the same path but in reverse.

If a higher bandwidth connection is available, which determination is made at step 106 shown in Fig. 4, step 106 also determines whether a connection can be made directly to WLAN 12 by way of wireless network adaptor 20. This step is performed by periodically polling the mobile terminal 14 to determine whether an "advertisement" message has been received by wireless LAN adaptor 64 from the wireless network adaptor 20 provided in WLAN 12. Alternatively, the WLAN interface 96 can detect whether an "advertisement" message transmitted by the LAN adapter 64 and mobile terminal 14 has received a response from the WLAN interface 96.

As one alternative, if no higher band with data connection is available, the present connection through the WWAN is maintained, i.e., cannot be handed off.

When a higher band with data connection is available which may be the result of the mobile terminal 14 moving into the service area of WLAN 12, a wireless data connection is established between mobile terminal 14 and WLAN 12 by way of adapters 64 and 20, respectively. The logon procedures are described as the "conventional registration procedures" except that the logon information is conveyed between mobile terminal 14 and wireless LAN adapter 64 by wireless

communication. At this time, the user has concurrent wireless data connections with **both** WWAN 10 and WLAN 12. The network access arbitrator 92 then causes a transfer of datagrams to be seamlessly handed off from the wireless connection with the WWAN 10 to the wireless connection with WLAN 12 while maintaining a session between applications 90 and 91. At this time however, datagrams are routed between applications 90 and 91 using the higher bandwidth data path between the WLAN interfaces 96 rather than the CAIs 94.

At step 126 a determination is made as to whether there is a need to handoff datagram transfer. The criteria for this is described as being the number of transmission errors detected by the WLAN interface 96 and the received signal strength (RSS) of signals received by wireless LAN adapter 64. If a handoff is warranted, a wireless data connection is re-established with WWAN 10 in a manner described above.

In contrast with the teachings of patent '581, in the example incorporated in claim 1 and responsive to a loss of connection with a first station, the wireless terminal scans for a second station, retrieves information from the second station, determines that the second station is different from the first station and transmits an association message to the second station and, upon receipt of an association success message, initiates a handoff providing information regarding the first station to the second station, whereupon the second station contacts the first station

responsive to the information received from the wireless terminal whereupon the first station reroutes traffic to the second station and releases the first station whereupon the second station, responsive to the handoff procedure initiated by the first station re-establishes the session between the wireless terminal and the second station. None of the above-mentioned features are taught or even remotely suggested by Patent '581 and especially the feature of the second station contacting the first station responsive to information received from said terminal and the said wireless terminal providing to the second station information regarding the first station for enabling said second station to contact said first station.

Claim 4, although eliminating a step of said wireless terminal scanning for a second station responsive to a loss of connection with the first station, recites the scanning step as being performed without the occurrence of a loss of connection with the first station. Also, claim 4 differs from claim 1 in providing the first station information regarding the second station whereupon the first station contacts the second station responsive to the information received from the wireless terminal. These features are neither taught nor remotely suggested by Patent '581 and it is submitted that claim 4 is clearly novel and patentable over the teachings of Patent '581.

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Claim 7 recites the means for performing all the steps set forth in claim 1 and, it is therefore submitted that claim 7 likewise patentably distinguishes over the teachings of Patent '581.

Claims 2, 3, 5, 6, 14 and 15 have been rejected under 35 U.S.C. Section 103(a) as unpatentable over Patent '581 in view of Verma et al. (Published application '792). This rejection is respectfully traversed.

Claim 2, as amended herein differs from claim 1, for example, in reciting the second station, responsive to an association message from the wireless terminal, contacting the wireless terminal to obtain an IP address of the lost connection and the wireless terminal providing the IP address of the lost connection responsive to the request, whereupon the second station contacts the first station to initiate a handoff from the first to the second station and the first station rerouting traffic to the second station and releasing the first station, whereupon the second station, responsive to the handoff procedure initiated by the first station, re-establishes the session between the wireless terminal and the second station. These features are neither taught nor remotely suggested by Patent '581, taken alone.

Claim 3 differs from claim 2 in that claim 2 recites a second station contacts the wireless terminal to obtain an IP address of the lost connection whereas claim 2 recites the second station contacts the first station to obtain the IP address. In view of this distinction as well as the other features which establish the novelty and

inventive step of claim 2 found in Patent '581 apply with equal measure to claim 3.

Claim 4 differs from claims 2 and 3 in that the wireless terminal, upon receipt of an association success message from the second station, initiates a handoff providing information regarding the second station to the first station and the first station contacting the second station responsive to information received from the wireless terminal and rerouting traffic to the second station and releasing the first station. Claim 5 is similar to claim 3 except that the step of scanning for a second station is performed in the absence of a loss of connection with the first station. Claim 6 is similar to claim 4 except that the step of scanning by the wireless terminal for a second station is performed without the need for a loss of connection with the first station. For these reasons it is submitted that claims 2, 3, 5 and 6 recite novel and patentable over Patent '581, taken alone.

Claim 14 recites the means for performing the step set forth in claim 2 and claim 15 recites the means for performing the steps of claim 3 and it is submitted that claims 14 and 15 present novel and patentable steps not found in Patent '581, taken alone.

Applicant agrees with the Examiner's statement that, with regard to claims 2, 3, 5, 6, 14 and 15 Jawanda does not teach the second station contacting the first station responsive to information received from said terminal to obtain an IP address of said loss connection and, as regards claim 2, 3, 5, 6, 14 and 15, Jawanda

lacks teaching of the terminal providing the IP address of said loss connection responsive to said request therefore.

With regard to, Publication '792, firstly it is noted that paragraph [0005] does not teach or suggest providing the IP address of a lost connection and does not even mention IP addresses.

Regarding paragraph [0015], the IP address obtained is for a tunnel end point 50 and not for a first or second station.

Regarding paragraph [0028] it should be noted that a disconnect message is sent to the connection end point. In the present invention, no such disconnect message is sent or required.

In the embodiment described in paragraph [0029] the "first connection initiator" is required to detect that the mobile client has left the first service area and thereby transmit a disconnect message, which is a totally different technique from that described in the present invention and set forth in claims 2, 3, 5, 6, 14 and 15.

Paragraph [0056] is directed to multi-casting and not to the techniques described and claimed in the present application.

In addition to the above, it is submitted that Publication '792 lacks the teachings lacking in Patent '581 and is submitted that the combination of Publication '792 taken with Patent '581 fails to teach or even remotely suggest the

novel and patentable features of claims 2, 3, 5, 6, 14 and 15 and it is submitted that these claims patentably distinguish thereover.

Claims 8-13 have been rejected under 35 U.S.C. Section 103(a) as unpatentable over Patent '581 in view of Chuah (Patent '416). This rejection is respectfully traversed.

Applicant agrees with Examiner that Patent '581 fails to teach first and second stations each being comprised of an extended service set (ESS) having an access point and an access router as enclosed in claim 8; and ESS of the first station including means for providing said terminal with an ESS identification (ESS ID) and a basic service set identifier (BSS ID) as in claim 9; the means for retrieving information from said second station retrieves an ESS ID and BSS ID of said second station for use by said means for determining, as in claim 10; said terminal further comprising means for connecting to an internet protocol (IP) network wherein said network is assigned an IP address as in claim 11; wherein said terminal further comprises means for connecting to an internet protocol (IP) network wherein said terminals connected through an IP address of said terminal as in claim 12; and wherein said scanning means includes means to lock on to a beacon from said second station as in claim 13.

Even assuming for the sake of argument that Patent '416 discloses the above features, it is submitted that Patent '416 lacks the teachings lacking in Patent '581

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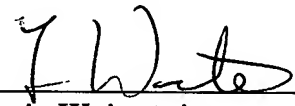
as set forth in the parent claim 7 from which claims 8 through 13 depend and it is therefore submitted that the combination of Patent '581 taken with the Patent '416 fails to teach or even remotely suggest the limitations of each of claims 8-13 further taken with the limitations of their parent claim.

In view of the foregoing, it is submitted that claims 1-15 patentably distinguish over the art of record and reconsideration and allowance of these claims are earnestly solicited.

Favorable action is awaited.

Respectfully submitted,

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